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ABSTRACT

There is considerable interest in the conceptualization and design of the clincial components of teacher preparation programs generally, and a growing interest in inquiry-oriented programs. This study sought to determine perceptions of the degree of implementation of an inquiry-oriented student teaching curriculum at the University of Northern Iowa. Subjects of the study were 110 student teachers who were completing their student teaching requirements, 94 cooperating teachers, and 7 university supervisors. The subjects responded to a questionnaire on how well the following major components of the curriculum were implemented: (1) teacher-student conferences; (2) student teachers' reflective journals; (3) student teacher participation in action research; (4) sharing of action research projects regularly in seminars; and (5) teaching activities (assumption of responsibility, planning, materials preparation, and student assessment). Findings indicated a high degree of implementation in all components. The paper describes the results of this implementation program. Implications for inquiry and reflective teaching methods are presented, and suggestions for improving clinical aspects of such programs are described. Participant responses on the implementation of each of the curriculum components are presented in tables and graphs. (JD)

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Implementation Of Inquiry Oriented Student Teaching Curriculum

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Abstract

This study describes the results of an implementation study of an inquiry oriented student teaching curriculum. Design procedures and results are presented. Implications for inquiry/reflective teaching methods are presented and suggestions for improving clinical aspects of such programs are described.

Implementation of an Inquiry Oriented Student Teaching Curriculum

Literature Review

The Carnegie Task Force and the Holmes Group reports identify the education of professional teachers as a major reform issue for the remainder of this century. Both groups identify similar features within their respective recommendations that include: differentiated professional levels of teachers, restructuring teacher preparation programs, and establishing model clinical sites for student and first year teaching. While these features center on the education of teachers, other elements focus on the professionalization of teaching and teachers.

A common outcome both groups identify is teachers' ability to reflect on professional practice. The Carnegie Task Force, quoted Keppel, (1986), in explaining the need for a Masters in Teaching degree, "It would develop their (teachers') instructional and management skills, cultivate the habit of reflecting on their own practice of teaching, and lay a strong base for continuing professional development. The Holmes Group includes as one of five goals: "To make education of teachers intellectually sound". Within this goal statement, "reflective, practical experience" is identified as an important component of competent teachers' knowledge (Murray, 1986).

Before the larger outcomes of these reform agenda can be accomplished, a theory of and preparation model for reflectivity must be determined which will guide program and practice decision-making. Defining reflectivity and proposing how reflective skills can be taught are beyond the Carnegie and Holmes Groups' present activities. The responsibility for this work rests with individual teacher preparation programs. The specific concepts used to delineate the reflective skills in the UNI student teaching program are defined here.

The concept of reflectivity is based upon the inquiry orientation to teacher education Dewey described over a half-century ago. Dewey (1933) made an important distinction in teacher practices when he conceptualized differences between routine and reflective teacher behaviors. Routine behaviors are guided by impulse, tradition and authority. Persons who teach from the routine perspective uncritically accept schools' defined practices and try to find the most efficient and effective way to implement those practices. Conversely, reflective behaviors involve active, persistent and careful consideration of any belief or practice and the consequences to which it leads. Persons who teach from the reflective perspective actively analyze their teaching practices within the educational, social, and political contexts. Dewey's comparison of routine versus reflective teacher behaviors has enhanced the understanding of inquiry oriented teacher education and has provided a conceptual base for defining reflective teaching practices.

Typically, definitions of reflective teaching practices include three dimensions that address conceptual differences: 1) the arena

of the problematic, 2) the model of inquiry, and 3) the ontological status of educational phenomena (Tom, 1985). These dimensions that distinguish the reflective teaching practices in this study are discussed below.

The first dimension, the arena of the problematic, suggests that a teacher withhold judgments concerning a particular teaching event in order to consider available alternatives to established teaching practice. In other words, the teacher questions teaching practices. The second dimension, the model of inquiry, suggests that a process is needed which will provide structure for teaching inquiry practices. The model (for teaching inquiry) most consistent with this study is that of the critical inquirer. The model of inquiry chosen to address the arena of the problematic depends to a great extent upon the perspective taken of the third dimension, educational phenomena. In this study, education is seen as a socially constructed phenomena which inquires into whether or not the current educational construction meets the needs and purposes of humanity.

Zeichner (1981-82) integrated the above dimensions into the following definition of reflectivity: "Reflective teaching ought to go beyond inquiry into the teaching learning process no matter how sophisticated the analysis to include consideration of one's ethical, moral and political principles" (p. 17). This integration provided the conceptual framework necessary to design and implement a reflective oriented student teaching program. Specific goals for our reflective oriented student teaching program are to prepare teachers who are:

1) Aware of what professional practices are available and how knowledge of professional practice is developed.

2) Knowledgeable of ways to adapt curriculum, methods, and teacher behaviors that will improve instruction.

3) Knowledgeable and skilled in discipline and classroom management procedures.

4) Reflective about the ethical and moral consequences of teaching practices.

5) Analytical of the consequences of professional practices.

6) Knowledgeable of the social/political context of teaching.

7) Able to demonstrate readiness to independently assume the role and responsibilities of a professional practitioner.

Five curricular program components have been identified to attain these goals: 1) Teaching, 2) Action Research (Kemmis & McTaggert, 1982; Tinny, 1983), 3) Seminars, 4) Journals, and 5) Supervisory Conferences. The remainder of this paper focuses on the degree to which the components were perceived implemented throughout the student teaching program.

As is clear from the literature review, there is not only considerable interest in the conceptualization and design of the clinical components of teacher preparation programs generally, but a growing interest in inquiry oriented programs in particular. The very number of program descriptions and scholarly papers written on various aspects of inquiry oriented clinical programs and their outcomes speaks to the growing interest and value teacher educators place on such approaches to preparing beginning teachers. Yet, there exist few

available analyses on the degree and overall success teacher educators have in implementing programs of this type and particularly in institutions where inquiry programs are replacing more traditional ones. Thus the purpose of this study was to determine perceptions of the degree of implementation of an inquiry oriented student teaching curriculum at the University of Northern Iowa.

The rationale, conceptualization and design of this curriculum was described earlier (Wedman, et.al., 1985) and was in its first year of implementation when the present study was conducted. Implicit in implementation research of any type is the " . . . problem of educational changes." (cf Fullan, 1982). The purpose of the change in clinical programs reported here was to enhance the ability of the university to prepare beginning teachers to be 'reflective practitioners'.

While there exists little research evidence that teacher education programs (or components) will result in either more "effective" teaching behaviors or improved pupil academic attainment than another, there exists a growing support within the profession for determining the perceived values of such programs. Based upon the limited knowledge base, conventional wisdom and commitment of the clinical teacher education faculty at UNI, we sought to determine whether or not (and perhaps more accurately - to what extent) the inquiry oriented student teaching curriculum as designed and delivered achieved 'actual implementation'. Fullan (1982) refers to this concept as ". . . whether or not there has been real change in practice as well as in the values supporting espoused programmatic changes."

In short, the primary research question we sought to answer in this study was whether actual implementation of the quality and type of student teaching curriculum we designed was perceived to have occurred. A secondary question focused on the nature of changes experienced by the major subgroups operating within the revised curriculum, i.e., student teachers, cooperating teachers, and university supervisors.

Method

Subjects

Participation was sought from 375 student teachers in eleven centers who were completing their student-teaching requirement during the spring semester of the 1985-86 academic year. One hundred ten senior level student teachers (elementary, secondary, and special area), 94 cooperating teachers (elementary, secondary, and special area teachers), and 7 university supervisors served as voluntary participants. Forty-eight percent of the respondents were teachers, forty-nine percent were students and three percent were coordinators. The students were engaged in a half semester student teaching requirement in one of eleven student teaching sites in the state of Iowa in what are termed "student teaching centers" (multiple school district within a center) operated by the university and staffed (university supervisors) by doctoral faculty holding tenured or tenure-track appointments in the College of Education.

Approximately half of the student teachers were elementary education majors and the other half were secondary or special area majors (i.e., art, music, physical education, and those with K-12 certification). Relevant characteristics of the sample (e.g., grade

point average, experience, course work, age and sex) were normally distributed across subjects.

The 110 cooperating teachers that supervised the student teachers were all state certified in the area in which the student teachers taught, were tenured faculty in their respective school systems, and had been trained formally (graduate course in student teaching supervision) and/or informally (consultation with the university supervisor) and were jointly recommended to supervise student teachers by their school systems and the university supervisor in their center. Approximately half held the masters degree and most had taught in their schools for ten or more years. Of the 110 teachers participating 94 returned usable survey data, thus reducing the original sample in the subgroup by 15 percent.

The 11 university supervisors originally included in the study were tenured or tenure-track faculty with appointments in the College of Education. Six hold doctoral degrees in one of two areas: Educational Administration or Curriculum & Instruction with supporting work in such areas as science, math, social studies, early childhood/elementary and reading education. The seven faculty supervisors had a range of university experience from 4 to 35 years; two were female. Seven of the eleven returned usable survey data, thus reducing the sample in this subgroup by 37 percent.

Materials

A survey instrument (See Tables 1-5) was developed by the researchers and consisted of five sections that covered the defined components of the student teaching curriculum. Items within each of

the subsections were constructed to allow the respondents to self-report the extent to which they perceived implementation of elements of the curriculum were scored on a six point Likert scale (1 = low; 6 = Not applicable). Individual items, clusters of items within the five components and the overall design of the instrument were evaluated by research and evaluation experts (individually and as a panel) within the university to insure validity and reliability.

The response rate on each item within the five components varied. For the cooperating teacher group the response rate ranged from 13 to 94; for the student teacher group the response rate ranged from 64 to 110; and for the university supervisors the response rate ranged from 5 to 7. The variability in the response rate was due to respondents marking item "6" ("NA" Not Applicable) for an item(s). These scores (NA) were not included in any of the data analyses.

Procedures

The new student teaching program was implemented during the first quarter of the 1985-86 academic year. The data in this study was collected during the ninth week of the last quarter of the same academic year. This time frame was chosen because student teachers and cooperating teachers change every quarter of the year, giving the university supervisor the opportunity to identify, refine and fully implement program components and procedures.

During the data collection period university supervisors, cooperating teachers, and student teachers were asked to complete a 48 item survey using a computer scoreable answer sheet. Each participant was requested to read and follow the directions and to

return the survey. When the completed surveys were received from participants all answer sheets were mailed in to the university office of Student Field Experiences for analysis.

Data Analysis

All responses were recorded on standard mark-sense scoring sheets for tabulation and subsequent analysis on a Harris H800. Descriptive statistics were computed for each program component and for each item for the three subgroups. In addition, univariate ANOVA's were calculated using SPSS-X, (Release 2). Program implementation was determined according to the following item and component mean scores categories: 1.00 - 1.99 = low implementation; 2.00 - 3.99 = moderate implementation; 4.0 - 5.0 = high implementation. The results are presented in Tables 1 - 5. The findings have also been summarized in a series of graphs (Figures 1 - 6), that will serve as the principal focus of the discussion of results that follows.

Implementation Results

Conferences. (Table 1, Figure 1, questions 1-11). The teachers perceived a high degree of implementation on all items except numbers 3, 5, and 6 which were perceived to be of moderate implementation. The students perceived a high degree of implementation on all items except 3, 5, 6 and 11 which were perceived to be of moderate implementation. The coordinators perceived a high degree of implementation of all items except 5 and 11.

Journals. (Table 2, Figure 2, questions 12-21). Both teachers and student teachers rated all journal items in the moderately implemented range. Coordinators rated five of the ten items (12, 13, 14, 18, and 21) in the highly implemented range; five items were rated as moderately implemented.

Action Research. (Table 3, Figure 3, questions 22-30). Both teachers and students rated all items in the moderately implemented range. Coordinators rated 22 and 26 in the moderately implemented range and the rest in the highly implemented range.

Seminars. (Table 4, Figure 4, questions 31-38). Teachers perceived a high degree of implementation except on items 32 and 33. Students perceived a high degree of implementation on items number 31, 33 and 38; the rest were perceived to be of moderate implementation. The coordinators perceived a high degree of implementation on all items except for 33, 34 and 37 which were perceived to be of moderate implementation.

Teaching. (Table 5, Figure 5, questions 39-48). Teachers, students and coordinators all perceived a high degree of implementation on all items, except that coordinators ranked number 43 on the borderline between moderate and high implementation.

Tests of Significance

Conferences. There was a significant difference between the coordinators perceptions of implementation and those of teachers and students. While all three groups reported a high degree of implementation, the coordinators perceived implementation at the highest degree (item 1). Teachers held higher perceptions of implementation

for conferences between teachers and students than did either students or coordinators (item 2). Although the coordinators perceived a high degree of implementation on conferences between the cooperating teachers and coordinators, teachers and students reported only moderate implementation (item 3).

All three groups reported that conferences designed to be helpful in the improvement of teaching skills (item 4) were highly implemented. All three groups noted that conferences incorporating ideas from journal writing (item 5) and conferences implementing ideas presented in seminars (item 6) were moderately implemented. While all three groups indicated a high degree of implementation for conferences providing positive feedback and suggestions for improvement (item 7), coordinators reported significantly higher scores than the other two groups. Similarly, all groups noted high degrees of implementation for conferences stimulating reflective thinking and related strategies used in teaching (item 8), for conferences promoting the exploration of alternative teaching practices (item 9) and for conferences providing support for personal and professional growth (item 10). All three groups noted only a moderate degree of implementation for three way conferences being held as needed (item 11). Of particular importance, items 8 and 9 suggest that reflective thinking within conference settings was highly implemented by all three groups.

Journals. There were no significant group differences in this category. Teachers and students were within approximately four tenths of a point in rating journal items. Coordinators, except in one instance, rated items in this category more highly than did teachers

and students. Coordinators and students gave reading of and written feedback to journals high implementation scores (item 14). The feedback, however, was viewed as only moderately valuable by coordinators (item 15) and viewed as even less important in respect to personal and professional change (item 17). Low points concern the journals' impact on personal and professional change and (item 17) the incorporation of journals into conferences and seminars (item 19). Coordinators began by rating journals as highly integral (item 12) to the program and thought they should be maintained as highly integral (item 21). Teachers and students rated journals as moderately integral (item 12) and were less enthusiastic about maintaining them in the program (item 21). The widest divergence between coordinators and students was whether journals should be maintained as an integral part of the program (item 21). The widest divergence between teachers and coordinators involved reading and written feedback (item 14). Reflectivity developed through journal writing (item 20) was reported in the moderate range for all groups.

Action Research. There were no significant group differences in this category. The means for teachers' and students' perceptions of implementation were within fifteen one hundredths of a point. Coordinators' scores generally followed the same configurations as did those of students and teachers, but coordinators rated all items higher. All groups agreed that action research was appropriate (item 23) and gave an opportunity to explore and reflect on an area of professional interest (item 27). Groups were less enthusiastic about action research (item 29) contributing to professional growth

or (item 25) improving information collection skills. All groups thought action research projects moderately integral (item 22). As to whether action research should be retained as integral, coordinators responded in the high range, students and teachers in the moderate range. Again, coordinators generally rated action research items consistently and higher than students and teachers.

Seminars. All three groups viewed seminars as open forums where a variety of topics could be discussed (item 31) as being highly implemented.

Students and coordinators reported a high degree of implementation of sharing of action research projects regularly in seminars (item 31). Teachers reported only a moderate degree of implementation for this item. This may reflect the fact that teachers do not attend these seminars.

The use of journals in discussions at seminars (item 33) received only moderate implementation scores by all three groups. Coordinators gave the lowest implementation score, which suggests journals are not viewed as significant to seminars by coordinators.

Teachers reported a high degree of implementation for the use of seminars to clarify the roles of professionals and non-professionals in schools and communities (item 34). Students and coordinators reported only a moderate degree of implementation for this item.

Teachers and coordinators indicated a high degree of implementation for the use of resource people at seminars (item 35) and students noted only a moderate degree of implementation on this item. This may suggest that students (due to a lack of experience) are less able

to see the relationship between resource people and how they can benefit from contributors at seminar settings.

Teachers and coordinators reported that seminars contributed significantly to addressing the needs of the student teachers (item 36). Students viewed this item as only moderately implemented. Overall, coordinators scores were significantly higher than the other two groups. Teachers report significantly higher implementation scores for seminars to provide time to reflect and develop plans for action (item 37) than coordinators or students. Students and coordinators viewed this area as only moderately implemented. This suggests that students and coordinators do not view with as much intensity as teachers do in utilizing the seminar for planning teaching strategies. All three groups encouraged the continuation of seminars as a component in U.N.I.'s student teaching program (item 38). There is additional indication that seminars are viewed as a constructive means for coordinating and enhancing the student teaching experience. Interestingly, on items 33 and 37, students and coordinators perceived seminars to contribute only moderately to reflective thinking. Teachers overall scores on this section were significantly higher than the other two groups.

Teaching. Teachers gave the highest total implementation scores of the ten items on teaching. The only item that was noticeably lower for teachers was item 45, "The student teacher was responsible for assessment of students." Assessment of all items by teachers averaged 4.82. Ninety-one percent of the teachers who participated assessed items on teaching.

Teachers scored significantly higher than the other groups on items 39 (purposeful observation), 40 (assumption of responsibilities), 46 (planning and materials preparation), 47 (assessment), and on the overall score for this category of items. Assessments of teaching by students averaged 4.71. Ninety-two percent of the student teachers who participated assessed items on teaching.

The only items noticeably high for the coordinators were 41 and 43. The only item that was noticeably low was 39. The other nine items averaged 4.46 for the coordinators. Teaching implementation scores by coordinators averaged 4.45. One hundred percent of the coordinators assessed the items on teaching.

The teachers gave the best total implementation scores of the ten items on teaching. The coordinators were less positive than teachers or student teachers in regard to success in implementing these items. Responses to items numbers 39, 40, 46 and 47 were significantly different among groups at the .05 level. The teaching section of this survey received a total average (teacher, student teacher, coordinator) of 4.74. This section ranked first in the total of six sections.

Summary

There were not enough coordinators in the data pool to provide a valid population. The fact that only 7 of the 11 coordinators participated made the contributions of coordinator of limited value in drawing firm conclusions.

The teaching and conference sections of the survey were areas of the U.N.I. curriculum on which all three classes of respondents reported

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adequate implementation. Since there was good participation by all three groups on these sections, the results from these sections may be particularly useful. The coordinators were more critical of implementation of the teaching section of the U.N.I. program than the teacher or student teachers. The three classes of respondents were not consistent in their overall assessment of teaching. There was however a high degree of implementation of this part of the U.N.I. curriculum.

The following conclusions are drawn from the results:

1. Conferences are implemented to a high degree for all groups. Response patterns for all groups closely parallel one another. Overall, this component received the second highest overall implementation score from the response groups. Seminars appear to provide a support to the stimulation of reflective thinking by student teachers.
2. Journal activities are implemented to a moderate degree by all groups. While the response patterns among the groups shows general similarity, differences are apparent. Generally coordinators report higher implementation then the other two groups. Overall this component received the lower overall implementation scores from the three response groups. It appears that journal writing provides some support to students in reflecting on their teaching.
3. Action research activities are implemented to a moderate degree by all groups. Again, group response patterns parallel one another. Coordinators report higher scores than the other two groups. Overall, this component received the second lowest overall

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implementation score from the three response groups. As an activity, by definition reflective in nature, action research provides support to students in reflecting on their teaching.

4. Seminars are perceived to be implemented to a moderate degree by all groups. The response patterns are generally parallel, with teachers reporting higher implementation than the other two groups. This component received the third highest overall implementation score from the respondents. Students and coordinators indicate only moderate influence from seminars on their ability to reflect.
5. Teaching activities are implemented to a high degree. Response patterns of groups closely followed one another. This component received the highest implementation score from the respondents. Unfortunately it is not possible to determine how characteristics of teaching are affected by reflective dimensions of other components of the study.

In summary, it appears that perceptions of our success in implementing an inquiry oriented student teaching program, as conceptualized, has been reasonably successful. It is clear from the perspectives of the various participants in the program that not all components are equally implemented. While the data gathered are too limited for a more full explanation of the differential perceptions of implementation one conjecture may be warranted. It may be that the relevance of any given component and its enactment by a given group varies as a function of role within the program, i.e., the closer an activity to the role of a participant the more relevance it has for that person/group and thus the higher degree of implementation

perceived.

It appears that where reflective characteristics/activities are incorporated those characteristics are more or less valued by participants. The most striking results here are to be found for the action research and journal components. These elements were specifically designed to engage students and coordinators in systematically planned reflection on teaching, and while moderately implemented not to the level desired.

Research which examines the success of reflective oriented student teaching programs has been inadequate. Current research efforts indicate that some preservice teachers do not succumb to the negative effects of socialization; but, the majority do (Zeichner & Tabachnick, 1984; Goodman, 1984). Some student teachers have the ability to explore and analyze schooling practices but the majority are more concerned about technical skills of teaching (Wedman & Martin, 1986; Mahlios, Engstrom & Soroka, 1985); though some student teachers view themselves as being able to change traditional teaching practices, the majority accept existing practices (Beyer, 1984; Goodman, 1984). One encouraging point in existing research is that in each study a few preservice teachers demonstrated some reflective behaviors. The question of what can teacher preparation institutions can do to increase preservice teachers' reflective teaching practices remains.

Recent research at our institution indicated that student teachers in a reflective oriented student teaching program became more reflective than those in a non-reflective (e.g. apprenticeship) oriented student teaching program (Wedman & Martin, 1986). While student teachers in

the non-reflective program demonstrated reflective thoughts at the beginning of the student teaching experience, they demonstrated fewer reflective thoughts at the end. Also, student teachers in the reflective program perceived reflective supervisory conferences as the program component that contributed most to their growth in reflectivity, followed respectively by seminars, action research projects, and journals. Further, student teachers reported a desire to be reflective teachers. These findings suggest that it is possible for student teachers to grow in reflective thinking practices when programs are designed to foster such growth.

Obstacles to lasting reform must be identified and restructured if educational reform is to meet the challenge of excellence. As one example, literature in teacher education argues that teacher education today encourage acquiescence and conformity to the status quo in school practices (Giroux, 1983; Popkewitz, 1979; Zeichner & Tabachnick, 1981). The process of conformity is evident in those vehicles that primarily serve to socialize novice teachers into the teaching profession - namely field experiences and student teaching. These components socialize preservice teachers into existing school practices because of lack of opportunities to examine how and why schools operate as they do or to understand the social and cultural contexts in which their practices are embedded (Lortie, 1975; Salzello & Van Fleet, 1977; Schoenrock, 1980). Equally distressing, some research suggests that field experiences, as presently conceived, promote preservice teachers' attitudes toward children, teaching and schools which are less-than-favorable (Alper & Retish, 1972; Dispoto, 1980).

The goals of field experiences can be accomplished if schools and universities establish partnerships based on awareness of the ethical and moral consequences of professional practice, willingness to use research and sound theory to seek and evaluate educational alternatives, and the commitment to meet the diverse needs of students. Such a partnership may provide the opportunity for university faculty, teachers, and school administrators to examine their behaviors by questioning established routinized instructional practices and institutional procedures. This approach, through reflective teaching, may bring renewed energy and needed insight into the teaching profession.

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Table 1

Descriptive Statistics and Univariate F's for Conferences

Question no.	Member of student teaching team			Alpha
	Teachers	Students	Coordinators	
1. Conferences between the coordinator and student teacher were a part of the student teaching experience.	4.32 (.77)	4.20 (.91)	5.00* (0.00)	.04
2. Conferences between the cooperating teacher and student teacher were a part of the student teaching experience.	4.71* (.47)	4.43 (.96)	4.28 (.95)	.03
3. Conferences between the cooperating teacher and the coordinator were a part of the student teaching experience.	3.81 (1.04)	3.72 (1.17)	4.42 (.78)	ns
4. Conferences were helpful in the improvement of teaching skills (i.e. questioning, identifying objectives).	4.41 (.72)	4.33 (.98)	4.57 (.78)	ns
5. Conferences incorporated ideas from journal writing.	2.83 (1.28)	3.02 (1.19)	2.71 (1.25)	ns
6. Conferences incorporated ideas discussed or presented in seminars.	3.07 (1.26)	2.97 (1.21)	2.85 (1.34)	ns
7. Conferences provided both positive feedback and suggestions for improvement.	4.72 (.49)	4.54 (.76)	5.00* (0.00)	.04
8. Conferences stimulated reflective thinking (analysis, evaluation, change) related to strategies used in teaching.	4.38 (.77)	4.37 (.80)	4.14 (.89)	ns
9. Conferences promoted the exploration of alternative teaching practices.	4.27 (.82)	4.16 (.96)	4.42 (.53)	ns
10. Conferences provided support in helping the student with personal and professional growth.	4.52 (.65)	4.27 (.91)	4.57 (.78)	ns
11. Three-way conferences (coordinator, cooperating teacher, student teacher) were held as needed.	3.89 (1.15)	3.76 (1.36)	3.71 (1.38)	ns
Total	3.96 (.56)	4.02 (.68)	4.15 (.40)	ns

Note. The top numbers are means with 1 being the lowest implementation rating and 5 being the highest. The numbers in parenthesis are standard deviations. The last column is significance levels for univariate F's. *Highest mean when ANOVA is significant.

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Table 2

Descriptive Statistics and Univariate F's for Journals

Question no.	Member of student teaching team			Alph
	Teachers	Students	Coordinators	
12. Journal writing was an integral part of the student teaching experience.	3.50 (1.33)	3.21 (1.38)	4.00 (1.41)	ns
13. Guidelines (topics, questions, format) were provided for journal writing.	3.52 (1.34)	3.54 (1.37)	4.00 (1.15)	ns
14. Journals were read by the coordinator and written feedback was provided.	3.50 (1.20)	3.88 (1.35)	4.71 (.75)	ns
15. Written journal comments by the coordinator provided valuable feedback.	3.44 (1.24)	3.44 (1.29)	3.83 (1.32)	ns
16. Journal writing complemented the other student teaching components (teaching, seminars, action research, conferences).	3.26 (1.25)	3.07 (1.23)	3.71 (1.49)	ns
17. Personal or professional changes occurred as a result of journal writing.	3.16 (1.20)	2.79 (1.18)	3.16 (1.16)	ns
18. The time required to write and/or read journals was a reasonable expectation.	3.23 (1.30)	3.39 (1.34)	4.00 (1.15)	ns
19. Content from journal writing was incorporated into conferences and seminars.	3.10 (1.33)	2.97 (1.16)	2.85 (1.06)	ns
20. Journal writing was helpful in the development of reflective thinking skills (analysis, evaluation, change).	3.34 (1.30)	3.45 (1.26)	3.80 (1.30)	ns
21. Journal writing should be maintained as an integral part of the UNI student teaching program.	3.19 (1.54)	2.99 (1.35)	4.00 (1.52)	ns
Total	3.10 (.92)	3.30 (.91)	3.68 (1.11)	ns

Note. The top numbers are means with 1 being the lowest implementation rating and 5 being the highest. The numbers in parenthesis are standard deviations. The last column is significance levels for univariate F's. *Highest mean when ANOVA is significant.

Table 3

Descriptive Statistics and Univariate F's for Action Research

Question no.	Member of student teaching team			Alpha
	Teachers	Students	Coordinators	
22. Action Research was an integral part of the student teaching experience.	3.06 (1.46)	3.43 (1.35)	3.85 (1.46)	ns
23. The Action Research Project was appropriate to the student teaching situation.	3.79 (1.52)	3.79 (1.20)	4.28 (1.49)	ns
24. The Action Research Project demonstrated the value of research in the classroom.	3.18 (1.40)	3.45 (1.31)	4.00 (1.41)	ns
25. The Action Research Project helped the student teacher improve information collection skills.	3.14 (1.37)	3.15 (1.36)	4.00 (1.41)	ns
26. The Action Research Project provided an opportunity to understand some of the fators that impact on schools today.	3.43 (1.35)	3.61 (1.19)	3.85 (1.67)	ns
27. The Action Research Project provided the student teacher with an opportunity to explore an area of professional interest.	3.72 (1.35)	3.88 (1.11)	4.42 (1.51)	ns
28. The cooperating teacher was made aware of the student teachers Action Research Project.	3.57 (1.70)	3.86 (1.40)	4.40 (.89)	ns
29. The Action Research Component contributed to the student teacher's professional growth.	3.43 (1.36)	3.29 (1.29)	4.00 (1.52)	ns
30. The Action Research Project should be retained as a component of the UNI student teaching program.	3.23 (1.60)	3.36 (1.41)	4.00 (1.52)	ns
Total	3.37 (1.34)	3.52 (1.02)	4.53 (.36)	ns

Note. The top numbers are means with 1 being the lowest implementation rating and 5 being the highest. The numbers in parenthesis are standard deviations. The last column is significance levels for univariate F's. *Highest mean when ANOVA is significant.

Table 4

Descriptive Statistics and Univariate F's for Seminars

Question no.	Member of student teaching team			Alpha
	Teachers	Students	Coordinators	
31. Seminars were used as open forums where a variety of topics could be discussed (i.e. discipline, motivation).	4.31 (1.15)	4.14 (1.07)	4.14 (1.06)	ns
32. The Action Research Projects were shared at seminars.	3.69 (1.70)	4.20 (1.34)	4.14 (1.57)	ns
33. Ideas from Journals were used for discussion topics in seminars.	3.40 (1.24)	2.93 (1.37)	2.42 (1.51)	ns
34. Seminars were used to discuss and clarify the roles of professionals and non-professionals in school and community settings.	4.25* (.57)	3.49 (1.17)	3.42 (1.27)	.04
35. Resource personnel were used at seminars to bring expertise to topics.	4.26 (.88)	3.70 (1.49)	4.00 (1.52)	ns
36. Seminars were developed that fit the unique needs of the student teachers.	4.46* (.74)	3.72 (1.17)	4.57 (.78)	.01
37. Seminars provided time to reflect and to develop plans for action.	4.11* (.75)	3.33 (1.17)	2.28 (1.38)	.00
38. Seminars should be continued as a component in UNI's student teaching program.	4.46 (.83)	4.22 (1.00)	4.28 (.95)	ns
Total	4.00* (.19)	3.70 (.76)	3.58 (.75)	.00

Note. The top numbers are means with 1 being the lowest implmentation rating and 5 being the highest. The numbers in parenthesis are standard deviations. The last column is significance levels for univariate F's. *Highest mean when ANOVA is significant.

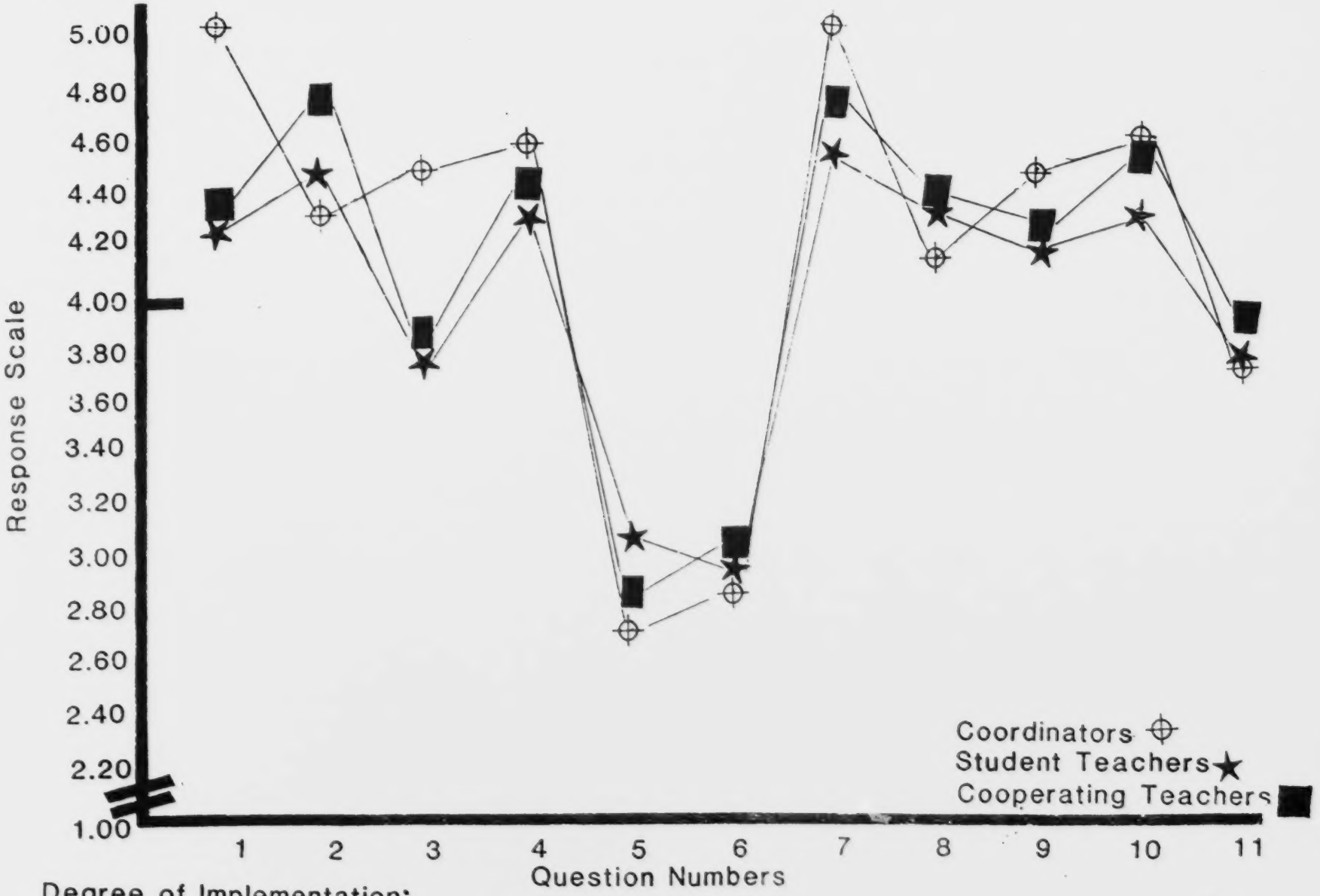
Table 5

Descriptive Statistics and Univariate F's for Teaching

Question no.	Member of student teaching team			Alpha
	Teachers	Students	Coordinators	
39. The student teacher was involved in purposeful observation.	4.73* (.49)	4.66 (.70)	4.00 (.81)	.01
40. Teaching responsibilities were assumed gradually.	4.80* (.45)	4.48 (1.00)	4.28 (.75)	.01
41. The student teacher was responsible for the instruction of individuals.	4.79 (.63)	4.80 (.63)	4.71 (.75)	ns
42. The student teacher was responsible for the instruction of small groups.	4.78 (.56)	4.67 (.89)	4.42 (.97)	ns
43. The student teacher was responsible for the instruction of large groups.	4.91 (.27)	4.91 (.31)	4.71 (.75)	ns
44. The student teacher was responsible for planning and materials preparation.	4.87 (.33)	4.89 (.36)	4.57 (.78)	ns
45. The student teacher was responsible for assessment of students.	4.65 (.67)	4.65 (.69)	4.28 (.95)	ns
46. The student teacher was responsible for classroom management.	4.93* (.25)	4.83 (.50)	4.57 (.78)	.05
47. Observations of the student teacher were part of the student teaching experience.	4.87* (.40)	4.67 (.63)	4.42 (.78)	.01
48. The student teacher had a minimum of 2 weeks of full time teaching responsibility.	4.83 (.65)	4.54 (.93)	4.50 (1.22)	ns
Total	4.81* (.25)	4.69 (.39)	4.40 (.55)	.00

Note. The top numbers are means with 1 being the lowest implementation rating and 5 being the highest. The numbers in parenthesis are standard deviations. The last column is significance levels for univariate F's. *Highest mean when ANOVA is significant.

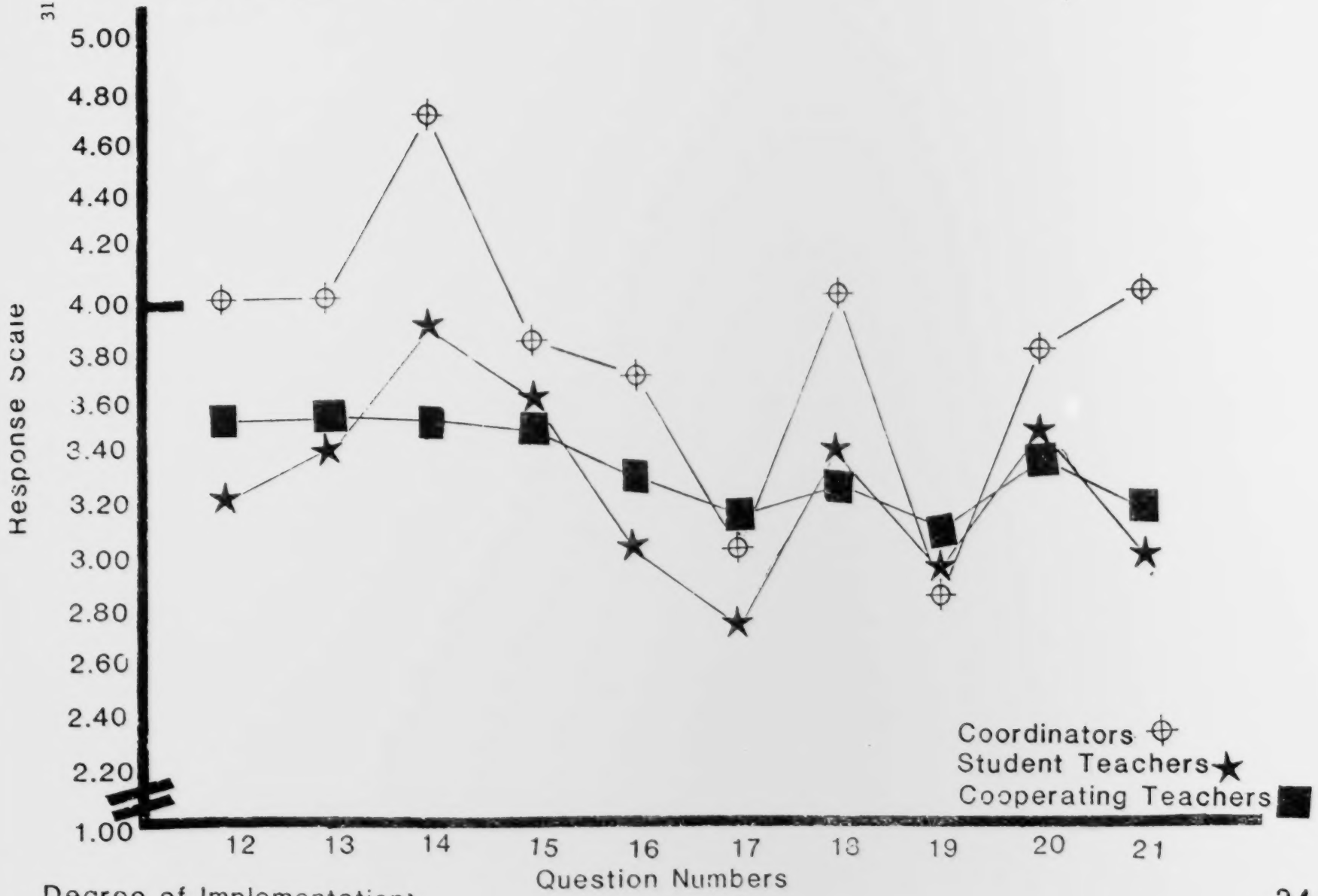
Figure 1. Implementation Scores on Conferences for Cooperating Teachers, Student Teachers, and Coordinators



Degree of Implementation:

1.00 – 1.99 is low 2.00 – 3.99 is moderate 4.00 – 5.00 is high

Figure 2. Implementation Scores on Journals for Cooperating Teachers, Student Teachers, and Coordinators



Degree of Implementation:

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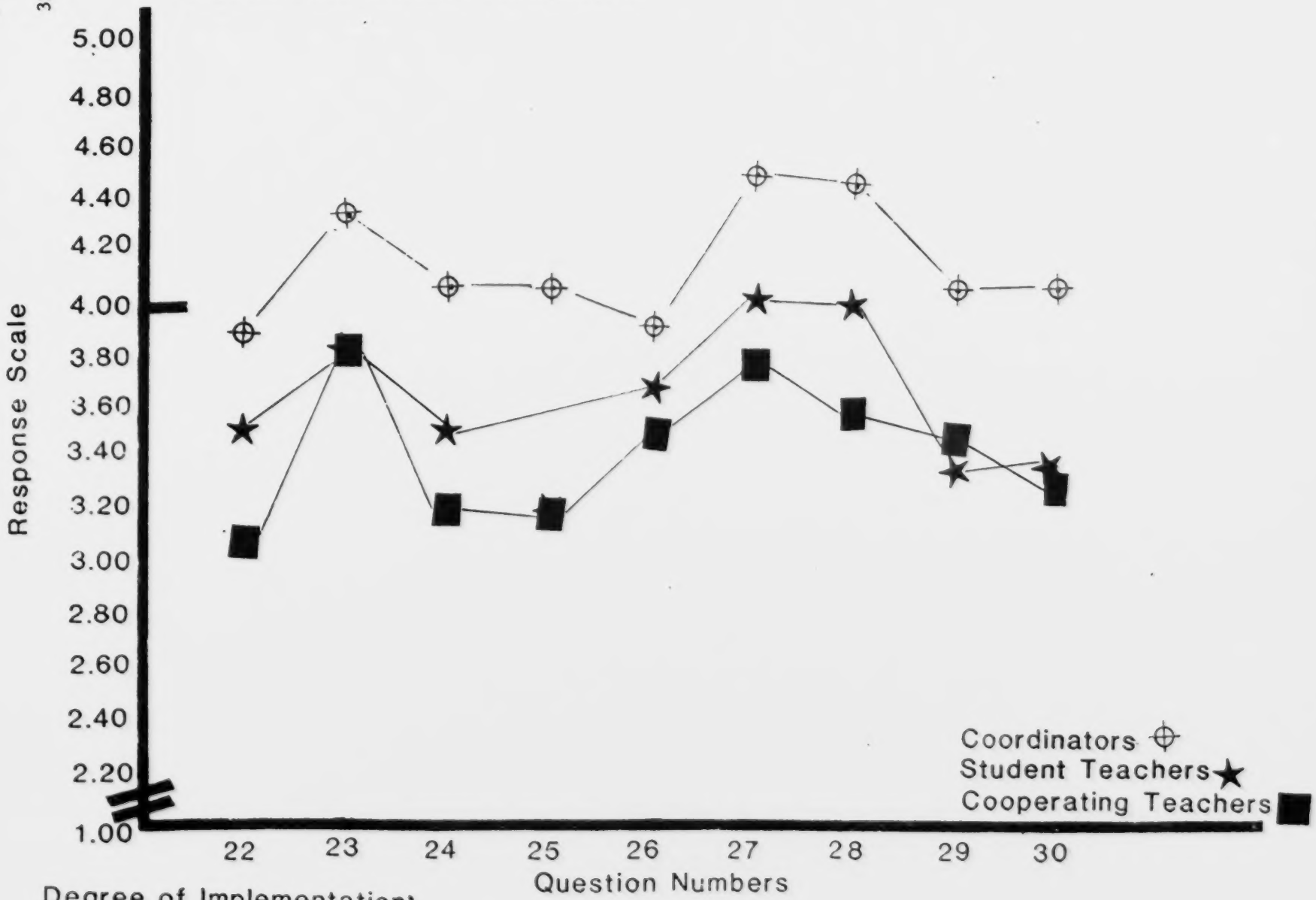
Figure 3. Implementation Scores on Action Research for Cooperating Teachers, Student Teachers, and Coordinators



Degree of Implementation:

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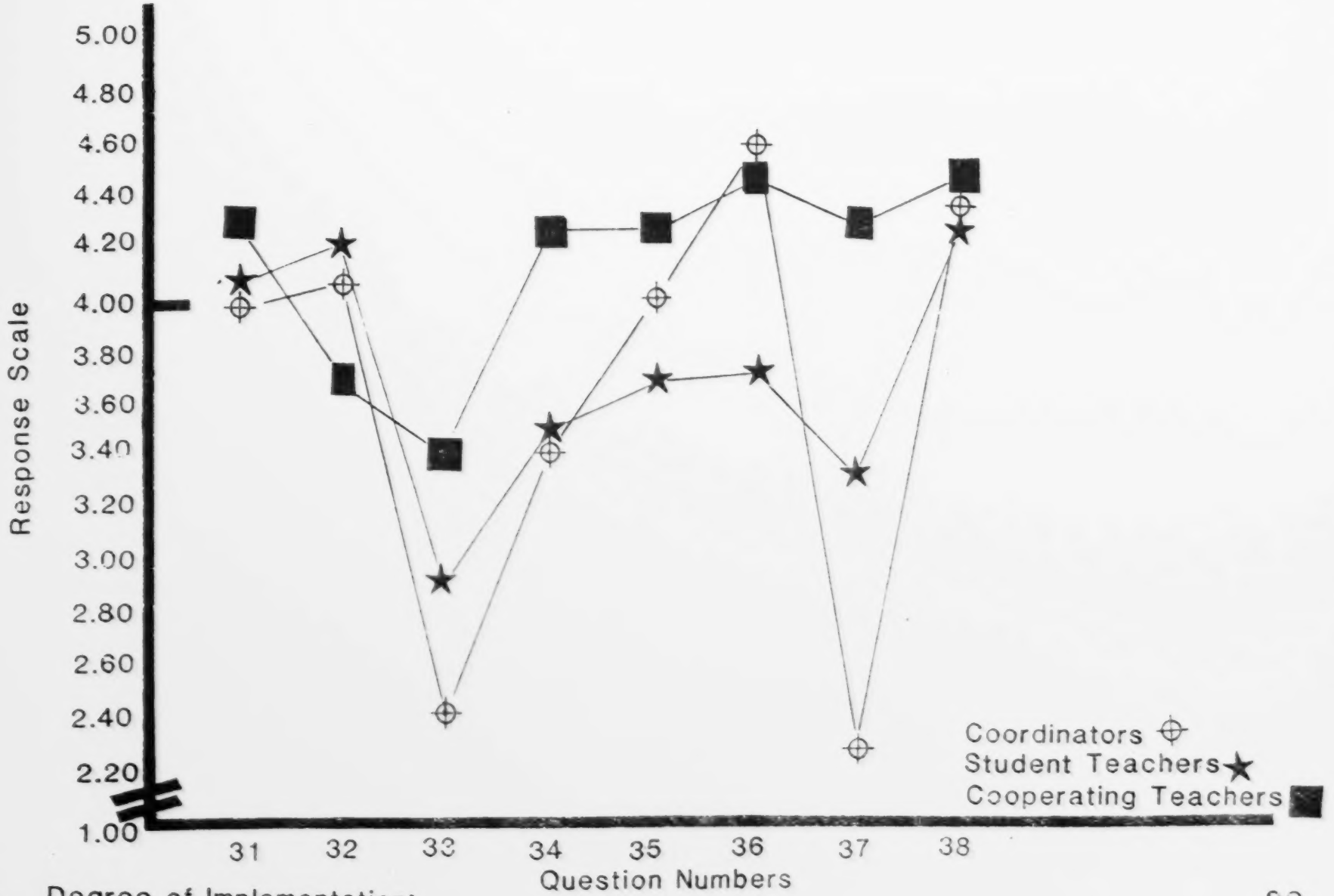
Figure 4. Implementation Scores on Seminars for Cooperating Teachers, Student Teachers, and Coordinators



Degree of Implementation:

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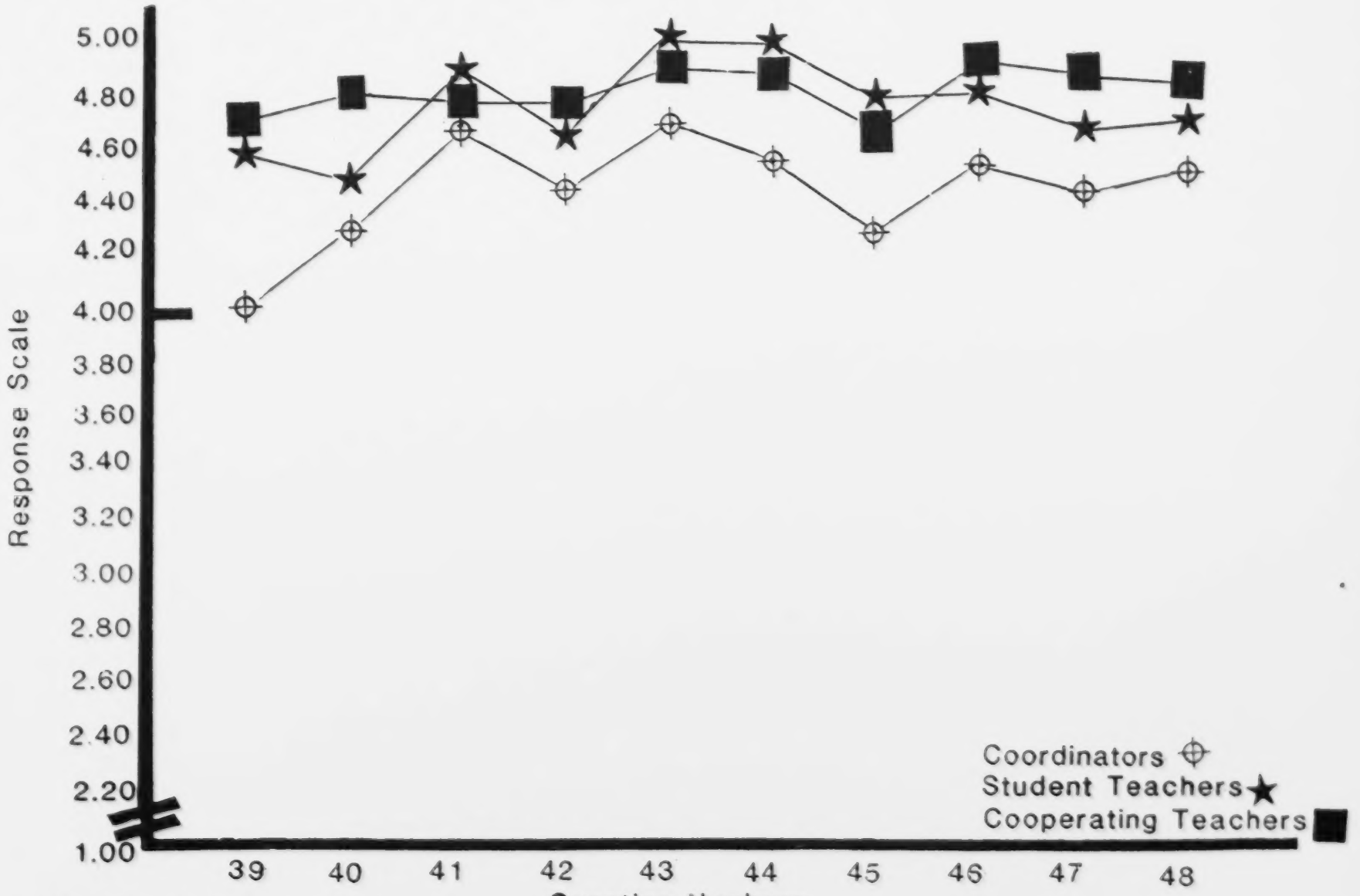
Figure 5. Implementation Scores on Teaching for Cooperating Teachers, Student Teachers, and Coordinators



Degree of Implementation:

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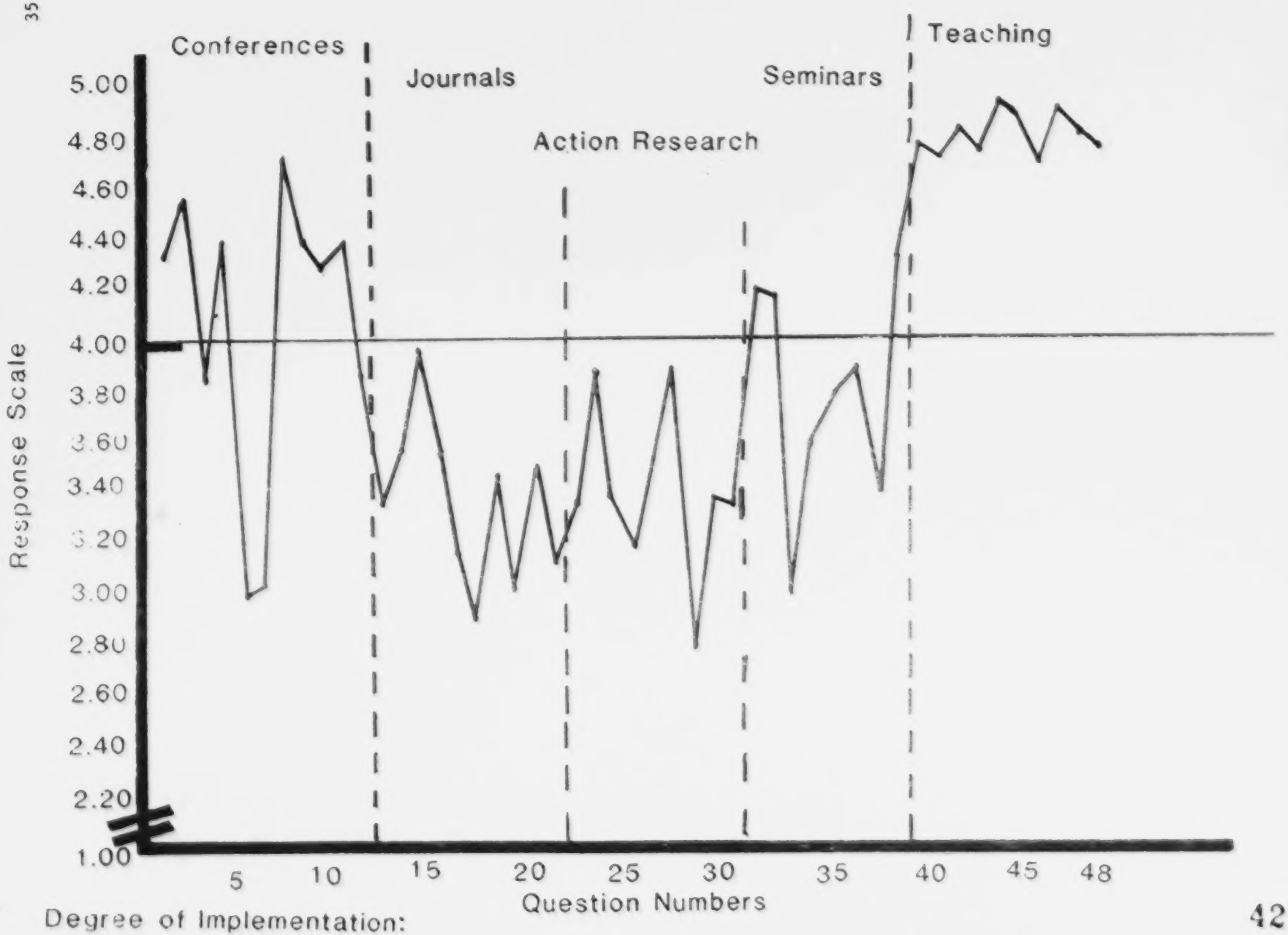
Figure 6. Within Group Mean for Total Sample



Degree of Implementation:

1.00 - 1.99 is low 2.00 - 3.99 is moderate 4.00 - 5.00 is high